MICHIGAN FARMER,

AND WESTERN HORTICULTURIST.

"AGRICULTURE IS THE NOBLEST, AS IT IS THE MOST NATURAL PURSUIT OF MAN."

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TERMS.

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We have been obligingly furnished by Dr. Comstock, our able and efficient Superintendent of Public Instruction, with a copy of his Annual Report to the Legislature, from which we extract the following judicious remarks. The introduction of the study of Agriculture in a simplified form, into our District Schools, could not but be attended with the most happy results—drawing the attention of the young to this as a pursuit, and imparting many of the fundamental principles of the science, at a time of life when the memory is most retentive, and the tastes of the future man are in the progress of formation. But the report will speak for itself.

Various reasons manifest the propriety of introducing agriculture, as connected with science, into our common schools, as a branch of popular education. Horticulture and agriculture, the philosophy of which is identical, were the earliest and chief earthly employment of mankind.—They were *to subdue the earth, to dress* and *to keep* the garden, and *to till the ground.* It is moreover written, that *the profit of the earth is for all.*

When our race were perfect, a garden fraught with beauty, fragrance, and food, in rich variety, was prepared, by their beneficent Creator, for their abode. This was the theatre of their delightful toil—their pure and sublime enjoyment. In the imaginative minds of poets, rural scenes and exercises are essential to the highest, purest earthly bliss. Although God has said to man, *In the sweat of thy face shalt thou eat bread,* and has thus declared, that his maintenance shall be the fruit of his industry, yet, he is not, by consequence, doomed to perpetual ignorance and degradation. This deplorable state is not the necessary result of any condemnation or law under which man is placed by his Heavenly Father.

In whatever aspect we view agriculture, we see it invested with immense importance. From it we derive most of the necessaries, comforts, and delicacies of life. They can be obtained from no other source. Without it, our condition, in many regards, would be assimilated to that of barbarians. It is radical to the existence and prosperity of the arts—of manufactures, and of commerce; and of almost every thing that constitutes the highest character of nations. We have a vast national domain. It possesses great fertility and variety of soil, with genial climes. It is capable, under a culture faithful to the laws of nature, as applicable to this subject, of producing the most rich and abundant harvests. Without a proper respect to these laws, however, a succession of crops will soon exhaust nearly all the native fertility of the earth. Most of our learned professions are crowded. Many of our young men seem to have fancied, that wealth, ease, and honorable distinction, are, almost exclusively, allied to the professions of medicine, law, or politics; and hence, have embraced one of these as the paramount object of pursuit. Too many, perhaps, have also embarked in merchandize, for the benefit of themselves, and the country. There are likewise, it is presumed, more mechanics, of some kinds, than can prosper in their calling.—Add to these, numbers of other individuals, who have no profession—are out of employment—know not what to do—are discontented; but who are capable of being useful, happy, and respectable, if suitably engaged in business. Multitudes among these, may have, all along, imagined, that the business of farming is necessarily associated with ignorance, rusticity, and servile labor.—They do not appear to recollect, that the class of farmers has furnished hosts of champions of the rights of man—many authors of useful discoveries and inventions—aye, men, who have extended, in various directions, the boundaries of science. The practice of farming, is a most noble and useful art. It is highly conducive to the health and vigor of both body and mind.—Like all other arts, it is founded upon science—the science of agriculture. Let the laws of this science be discovered, studied, and understood—let an enlightened application of them be made in the prosecution of agriculture, and its theory and practice, will be highly interesting—it will be elevated and popular. A vocation, thus rendered pleasing, lucrative, and honorable, cannot fail to command the attention of vast multitudes of our fellow citizens. Among these will be many from the various ranks to which allusion has been made. The idea that manual labor is incompatible with intellectual and moral improvement, and refinement of manners, is utterly inadmissible. It is nullified by the physiology and history of man. Labor is favorable to observation, study, and reflection. The most laborious person may frequently find minutes, hours, and days of leisure, in which he may indulge a fondness for reading, study, and mental cultivation. Whatever shall diffuse abroad a literary and scientific taste, is a desideratum. Solid learning promotes individual and social prosperity and happiness. It is material to the improvement and perpetuity of our political institutions.

Agricultural education in our common schools, from well adapted text books, and otherwise, and by competent teachers; and introducing into our school, and other public libraries, books of a popular character, on agriculture, connected with science, will among other advantages, cultivate and diffuse that taste and learning which are so desirable. Agriculture is an ample subject. It has many auxiliary branches. The appropriate text books, will, no doubt, be obtained, or prepared. Adaptation in these, as in many other things, is all important. From the agricultural education acquired in our primary schools—extended by reading books on the subject, drawn from our public libraries, and from other sources, very many of our youth will elect farming as a livelihood. This, it must be confessed, would be a wise election—for surely, it is a calling for which Heaven has many smiles. It is obvious, that the text, and other books, suitable for our township libraries, should be plain—divested, so far as practicable, of all technicalities—free from that obscurity, usually consequent upon prolix and involved sentences. They should, at the same time, be written in a manner, sufficiently pleasing, animated and ornate, to be interesting and attractive to the great mass of readers. It is a matter of surprise and regret, that a great agricultural people, as are those of the United States, should have, so long postponed that attention to this subject, which its intrinsic and relative importance demands. But the prospect grows more animating. Farmers, philosophers, and statesmen, are now, in great numbers, directing their earnest attention to this important interest.—They have poured much light upon this department of useful knowledge, and won for it the public favor. It is respectfully submitted, whether it would not be wise and prudent, to provide by law, for the delivery of lectures, annually, in every school district, upon agriculture and its kindred sciences. The salutary influence these lectures would produce on the public mind, in reference to agriculture and rural economy, those cardinal interests of our country, would evidently increase the wealth, respectability and power of the State.

In the view of the preceding considerations, and many others that might be suggested, the undersigned is decidedly in favor of the introduction, into our common schools, of agricultural education, and into our township libraries, books, of a popular character, on agriculture connected with science.

Theoretic Agriculture.—The New York Agricultural Institute is a regular college for teaching, besides other things, a system of agriculture. The student in agriculture will be taught all facts in chemistry, in geology, and botany, useful to the farmer—the draining and preparation of soils—the collection, storage, and preservation of provender and fruits—the feeding and improvement of stock—care of orchards, vineyards, &c.—the preparation and economy of manures, both organic and mineral, with their action and causes of success or failure. In short, all the topics embraced in the courses given by Professors of Agriculture in European colleges, will be discussed.

Make Your Own Candles.—Take 2 pounds of alum for every 10 pounds of tallow; dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it clarifies and hardens the tallow so as to make a most beautiful article for winter or summer use, almost as good as sperm.

Married Men.—The more married men you have says Voltaire, the fewer crimes there will be. Examine the frightful columns of your criminal calendars, you will there find a hundred youths executed to one father of a family. Marriage renders a man more virtuous and more wise. The father of a family is not willing to blush before his children.

A coarse looking fellow went up to an old gentleman, and holding out his hand, remarked, "My dear sir, I can't call you by name, but I am sure we have been together somewhere." "We may have," said the old gentleman, "for I have been in some very bad company in my day."

Subsoil Plowing.

The advantages of subsoil plowing, have been very forcibly called to mind by the subjoined article which we copy from our intelligent cotemporary, the Southern Planter. It is many years since we recommended deep plowing, and it is not a little gratifying to us that we find the dread of disturbing the till pan beginning to disappear from the minds of many, who, some few years since, would as lief have crossed the path of a boa constrictor, as break up the clay resting beneath some four inches of exhausted sand, which, from time immemorial, has answered as an apology for soil. We recollect to have called at a farm in a neighboring county, in 1839, to get our horse fed. It was in the occupancy of a tenant who had resided there for twenty years, and who, in the whole course of that time, had never penetrated the earth with the plow, more than three inches. When we called, we found him engaged in *scratching* the earth with a one-horse plow, going scarcely deep enough to cover the poverty grass with which the field abounded.—After saluting him, and procuring a feed for our horse, while the animal was masticating his meal, we entered into a pretty free conversation with our host, which we will here repeat, with the view of showing how absurd are the notions of men, who are wedded from the prejudice of ancient prescription, to old practices, and eschew all book farming as worse than nonsense.

'Why do you not plow deeper, my good sir?'

'God bless your soul, stranger, if I *was* to break up till bottom, and turn up the red clay, I should *pizen* the ground, and nothing in the *yearth* would grow, and besides all the manure, (and I have none to spare,) would sink down into the ground, and my *crop* of corn wouldn't *git* no good from it; as it is, the manure I *puts* on the ground sinks into the *yearth*, and I only *gets* benefit from it for one crop.'

'Well, now, my good sir, you have given me your *theory* for shallow plowing, and with your permission, I will give you mine in favor of *deep* plowing.'

'What do you mean by theory?'

'*Theory* means the settled ideas which a man may have imbibed, as the governing principle of his action, and is to him the motive of his practice.'

'I don't understand you.'

'Then, sir, what I mean by theory, is this—it forms the *reason* of my doing any thing—for instance, if I were going to plant corn in this field of yours, I should manure it, because *theory* tells me that the plants would require feeding to make them grow. Do you understand me now?'

'Oh yes.'

'Then I'll give you my *reasons* for *deep* in preference to *shallow* plowing, and why I should mix a portion of the clay that lies beneath, with the sand above. You are fearful to break the pan, for fear your manure will sink, and yet you admit that what you put on the ground only lasts for one season, and you apprehend that as it is, it sinks into the ground and gets below the reach of your crops. Now I think you are mistaken as to the cause of the loss of the good effects of the manure. I believe that, instead of its sinking, and thus eluding the reach of the roots of your growing plants, that it escapes from the *surface* of the earth. You bury it so shallow, and expose it so immediately to the sun and atmosphere, that, upon every succeeding rain, the manure rots faster than is necessary to the sustenance of your crops—faster than the rootlets can take it up, and as the most valuable, if not, indeed, the only part of manure that is valuable, is light and volatile—it escapes through the pores of the earth, and is wafted away by the wind, and in all probability, is carried to your neighbor's land, where if it has a suitable soil, it is attracted and absorbed, to enrich his land, and nurture his growing crops. I notice that your corn stalks are very small and easily broken. The reason of that is this—there is very little potash in your soil, and hence not enough to dissolve the sand, and form that flinty substance which constitutes the elastic principle that enables either grass, corn, wheat, rye, or barley, to stand erect. In all virgin clays there is more or less potash, and if you turn up some of your subsoil, and cross plow it, so as to mix it with the sand, you will just supply your land with one of the very ingredients which it wants.'

'Well, but the red clay will *pizen* the land, and nothing will grow on it.'

'Not so. I don't wish you to turn up more than two inches at one plowing, and whatever may be injurious to vegetation, in that quantity, will be corrected by the sun and air. It is the oxide of iron, which gives the red color to the clay underneath the sand of this field, which, if it were in too great quantities to be brought into immediate contact with the roots of growing plants, might possibly injure them, but the quantity I name, could do no harm. If you had *lime* to apply to your land, the oxide of iron would be converted into a substance similar to plaster, and an immediate benefit would enure to you, in a two-fold sense, first by neutralizing the bad effects of the iron, and secondly, by converting the latter into plaster.'

'Who ever *hearn* of iron being in the ground, except in lumps as hard as stones?'

'Many before you were born.'

'But let me proceed. By annually turning up a portion of your clay, instead of having to cultivate an almost barren sand as you now have, in a few years you would have a good mould, that would resist the influence of the scorching rays of the sun, and your crops would avoid being burnt up by the slight drouths. Your manure, instead of being drawn up and lost through the heat of the sun, will remain in the earth, rot gradually, and as gradually supply your growing crops with food, and you will find that, instead of having to manure every year, once in four years will answer, and particularly if you sow clover and turn that in every second year.'

'Why, bless you, clover won't grow here.'

'Yes it will, if you do as I tell you: plow deeper, turn up and mix the clay with the sand and lime in your land. If you can't afford to lime, plaster it. A bushel to the acre for a year or two will enable you to raise clover, provided you turn up the clay and get the potash into action.'

'Potash! why, there never was either potash or ashes put on this ground, and I'm too far from market to haul it, if I was even able to buy it.'

'There is potash in the red clay.'

'How did it get there?'

'Providence placed it there, for wise and beneficent purposes, and it remains for you to use it or not, as you may see fit. Plow deeper, I tell you, and you will find potash enough, to add to the fertility of your soil and increase your crops.'

'I *reckin* you're a book farmer—you talk so like the strange things *I's hearn on.*'

'No, my good sir, I'm not a book farmer, but like yourself, a farmer in a small way, even smaller than you are, yet I do read books, and papers too, on farming, and have read them with delight, and I hope with profit, from my earliest recollection. What I see in them that my judgment approves, I practice, if an occasion offers—what I see that I do not approve, I reject—and if you were to take an agricultural paper, both you and your children would profit by it. No man ever yet read any thing without gaining by it. The agricultural papers, besides containing the essays and views of *theorists*, have much of the practical experience of *practical* men in them, and by reading them, men become acquainted with the customs and modes of culture of all parts of the world, and surely, with such a field before them, those who do not improve by it must be dull indeed. But I have a few words more with regard to deep plowing, and its effects in promoting the growth of crops. By deepening the bed in which the plants have to grow, you enlarge the pasture of the plants: you enable their rootlets to descend, as well as spread with more facility, and it must be obvious, that by so doing, you greatly improve their chance of growing, as the less difficulty they may experience in searching for food, the better chance will they have of thriving. You say that the red clay beneath the sand is poisonous to your crops. Be it so. But keeping it in a compact form, you do not render it less injurious, for notwithstanding its hardness, the roots of your corn will penetrate it several inches, so that the objection which you have raised, is *imaginary* not *real*, and by keeping that stiff clay in an unbroken state, you present it to the roots of your corn, in the very worst and most injurious form that you possibly can—plow deeper, turn it up to the action of the sun, the air, and the rains, and *you will soon rid* it of its poisonous qualities.'

'How deep would you recommend me to plow?'

'Why, I would have you to increase your soil two inches each year, until you get at least nine inches in depth.'

'Why, bless you, stranger, my plow can't never go that deep, and besides, my horse couldn't never turn up nine inches.'

'Get a bigger plow, and put in two horses instead of one. By getting a deeper tilth, you will enable your land to absorb a good deal of manure from the atmosphere.'

'Who ever *heard* talk of manure being in the air?'

'I have. There is at all times floating in the air, a substance, which if you can only impart to your soil the power of attracting and absorbing it, you will find that it will add greatly to the fertility of your land. That which escapes from your soil as the manure rots, is the substance I mean, and it is carried away from you, to add to the fertility of your neighbor's land, because of its being in a condition to retain it. As the manure in your barn-yard rots, its most enriching properties are carried off by the same process and lost to you. If you wish to prevent such loss, you can do so, by keeping a few inches of dirt of any kind spread over your manure. This will act in a two-fold way, beneficially to your interest. It will prevent the escape of the gaseous substances I have spoken of, while the body of earth above the manure, will become impregnated with the richest of the manure, as decomposition goes on, so that the earth, thus placed on the top, will become as good as any part of the manure. You have often smelt at a distance from your manure pile, an unpleasant stench, have you not?'

'*Yes.*'

'Well, that is what I call a gaseous substance, and the very best and most fertilizing part of the body of your manure pile. It is that which flies off with each current of wind, is lost to you, and enriches the better land of your neighbor, because that land is in a condition to attract and absorb it, as I have told you.'

'Well, stranger, I don't understand all you have been saying, though I think I'll try to plow a *little* deeper, and burn some of the shells about my house and shore, and see if I can raise clover.'

'If you'll do so, you may raise clover and timothy too, and make three bushels of corn where you raise one now. Do you raise any wheat?'

'No—my ground won't grow it.'

'Follow my advice, and after you get a good crop of clover, plow that in, seed your field down in wheat, and I'll promise you a good yield, provided you apply ten or twenty bushels of lime to the acre.'

'They *tells* me that a hundred bushels is not too much.'

'That's very true, but the quantity I have named will answer for several years, and I see no necessity for a man of small means applying a large quantity, when a smaller one will answer present purposes. I believe that lime is not only an alterative, that is, an amender of the soil, but I believe it is also a positive manure, that is, that the plant takes it up as a nutriment.'

'Nutriment! what is that?'

'A substance that nourishes and encourages the growth of plants.'

With this our conversation ended, and we were happy to learn only a few days ago from the individual to whom it was addressed, that he had followed our advice, and had last year, from a field which he was formerly in the habit of getting from two to four barrels of corn to the acre, according to the season, gathered upwards of eight barrels, and that he had grown as fine a crop of clover as he wished to have, when, in former times, when this field was *resting*, nothing but a poverty grass and stinted weeds reared their heads.—*American Farmer.*

Indian Corn—New Variety—Planting.

The following description of a process by which a new variety of Indian Corn was produced, is found in the Albany Cultivator, and may not be uninteresting to our readers :

I send you a few ears of a new variety of sweet corn, obtained by the process detailed below :

1st *year*. I had a very early yellow corn, but quite diminutive in its growth—the stalks not over three feet in height, and the ears not over four inches in length. Late in the season I planted this in a patch of sweet or shriveled corn, then considerably grown. As soon as the tops or blossoms of the yellow corn protruded, they were cut off, in order that the early corn might be impregnated only by the sweet corn. The result this year was yellow corn of the usual size and appearance.

2d *year*. The last year's product was planted by itself, at a distance from all other corn. The result was, a corn growing about five feet in height, having ears 7 to 8 inches in length, with a mixture of yellow and white smooth corn and sweet or shriveled corn on the same *cob*—fit to eat about the middle of July.

3d *year*. I *separated* the corn into two parts, the smooth by itself, and planted them apart, at a distance from other corn. The product this year corresponded mostly with the corn planted, only there was a slight mixture of the shriveled upon the smooth corn, and of the smooth upon the shriveled. The smooth was fit to eat about the middle of July, and the shriveled about a week *later*.

4th *year*. I again planted the smooth and the shriveled corn in separate patches. The smooth was fit to eat the 18th of July, and the shriveled the 24th. The height of the stalks averaged about five feet. The character of the two kinds seemed now to be permanently established. The smooth corn produced its like, as did the shriveled. The latter has the disadvantage of being yellow, but is earlier than common sweet corn and equally palatable. The smooth corn has a mixture of white and yellow on the same cob.

5th *year*. I *separated* the yellow and white smooth corn and and *planted* them apart from each other. The result is, two distinct varieties of smooth corn; the earliest, fit for eating the 19th of July. The white partakes very much of the tenderness of sweet corn. Some portion of it was about a week later than the rest and grew about a foot higher.

6th *year*. Having *separated* the earliest of the white corn from the *latest*, I planted them apart, and thus *procured* two distinct varieties of smooth white corn; one fit for boiling the 18th of July, the other about a week later. *Upon* the ears of the earliest variety of last year's growth, I noticed a few scattering kernels of white sweet corn. These were carefully picked out, and planted this year by themselves. The result is a white sweet corn, fit for boiling the 18th of July, corresponding with the earliest smooth corn in size of stalk and ear.

My object in instituting this experiment having been to obtain a corn, suitable in color and early maturity for marketing, I discarded the yellow varieties, closing the experiment in possession—

1st. Of a white, smooth, eight rowed corn, with ears seven to eight inches long, approaching the common sweet corn in flavor, and fit for boiling the 18th of July.

2d. Of a similar corn, but somewhat larger in stalk and ear, and a week later.

3d. Of an *eight-rowed sweet corn*, with ears six to seven inches long, and fit for boiling the 13th of July, (in 1844, 14th.)

The last variety, proving to be the precise article that I was in pursuit of, I have for three years past kept for cultivation that alone. It is that which I send you.

A word upon the proper depth of planting Indian corn. A small patch of the early sweet corn above mentioned, was planted last spring *three inches* deep. It came up well and grew thriftily till it was 3 or 4 inches high, but then came to a stand. It remained without increasing its height perceptibly, a full fortnight, while another patch of the same kind of corn grew rapidly. On examining the roots of the non-growing corn, it was found that a joint had been formed about an inch and a half above the kernel, and that roots had sprouted out from the joint, *leaving all below to perish*. In other words, the plant had abandoned the lower roots at three inches in depth, and formed a new set, an inch and a half from the surface. While the process of changing the roots was going on, the plant seems to have ceased to grow above the ground. The effect was, to retard the maturity of the corn about a fortnight: but I do not know that its size and productiveness were ultimately impaired.

The inference which I make is, that corn, *to be early*, should not be planted more than 1½ inches deep.

Noyes Darling.

New-Haven, Ct., November 18, 1844.

Facts for Laboring Men.

Notwithstanding all the improvements in the useful arts, in science, and in labor saving machinery, by which one man performs the work of ten, the statistics of all civilized nations reveal the startling facts that Pauperism, Crime, and Insanity, increases *faster* than population. It is known that steam in Great Britain does the work of millions of human beings, and yet Mr. Coleman states on what he regards as good authority, that there are in England and Wales a million and seventy thousand public pupers ! In our own state the expense of supporting the poor last year if I mistake not, exceeded $700,000. Over $17,000 "poor accounts," or accounts for taking care of the poor, have just been allowed by the board of supervisors in Erie county: nor is this an unusual sum. As God has given to each person but one pair of hands to work and provide food for one stomach, which must be fed three times every day—to work, and provide clothing for one naked back, a shelter for one houseless head, and for all its physical wants in infancy, sickness, and old age, it is plain that, if one person shall acquire a sum equal to the entire earnings of ten pairs of hands, some of the mouths attached by nature to these ten pairs of hands may go hungry. They may lack clothing and shelter, merely because they do not know so well how to keep and enjoy the fruits of their own industry, as other members of the society in which they live, know how to exchange their shadows for the laboring man's substance.

Of what avail is it to a man that the annual product of his labor be increased five-fold, if he despise knowledge and allow his joints to be treated like gudgeons running under water, that never receive one drop of oil?

Farmers are much in the habit of changing work with merchants and professional gentlemen. The exchange is generally made in this fashion: The man who has devoted his life to the study and practice of agriculture, gives six days of his labor for one of the merchant or of the dealer in law or medicine. If either of tho latter can find employment at this rate throughout the year, he may consume the entire product of one pair of hands, and lay up a sum equal to the whole earnings of five tillers of the soil. Estimating the value of this agricultural labor at $200 per hand, or at $1,000 for the five, instead of paying $70 a year to the laboring man who created this property, in the shape of interest, the man who has *acquired* it, lends it to the very men that produced it, and to their children after them, as a fair equivalent for 100 days work every year, at 70 cents a day !

Let me suppose there was property sold in the year 1820, at 150 millions of dollars, in this great state, subject to an interest (less than 7 per cent) which would double the principle in 15 years. Call the population of the state at that time 1,250,000, which is not far from the truth. Since 1820 the population has doubled, or it is now 2,500,000. Look now after the property of $150,000,000 at interest. In 1832, it was 300 millions, in 1844, 600 millions. While this dead matter, called sometimes gold and silver, at others something else, which can neither move, think, nor do the least thing whatever, has increased four feld, and drawn from human thought and muscle 450 millions without paying the debt, the number of laboring hands in the state to work and pay the interest on 600 millions, is only double the number which had to pay the interest on the original debt of 150 millions. If the tax on labor increase twice as fast as population, what but incaeasing poverty and crime can result?

I have stated the above facts to demonstrate the reason *why*, pauperism is increasing so rapidly in the Empire state. In this free and civilized land we call the *annual service* of $5,000 in gold which needs no food nor raiment, and which will last a thousand years, worth $7 per cent, or $350. To pay this, in the plenitude of our kindness to humanity, which must unfortunately be fed and clothed, we usually allow for labor one dollar a day. In England they lend gold at 3½ per cent, and credit labor fifty cents a day. In France and Germany, gold is loaned at 2 per cent, and labor credited about 25 cents a day.

The great error in all this matter is committed by the borrower, not the lender, in each of these countries. No man, as a general rule, is compelled to run into debt, when he begins in the world. If all interest on money were abolished, it would not prevent in the least, ignorant or foolish men, from selling their labor, or its products, at a price less than their value. *Knowledge* is the one thing indispensable, not less to keep, than to produce the comforts of life. By trading and gambling a man may draw a prize : but the chances are that he will buy a blank.—When every human intellect shall know how to make one pair of hands work to the best advantage, and also how to keep and enjoy what they produce, to bless himself and his own household, pauperism, crime, and insanity will be nearly banished from the world. When no man can obtain wealth except by the sweat of his own face, over and above what he consumes, he will no longer cherish that morbid "love of money," which the Bible denounces as "the root of all evil." The equality of condition, which would result from every man's keeping the fruit of his labor or a fair equivalent, would remove the exciting cause of much of the pride, envy, extravagance, idleness, vice, and disease, which now afflict those that needlessly violate the laws of their being.—*Albany Cultivator.*

Buffalo, Nov. 27, 1844. D. Lee.

To prevent Colts chewing their Halters.—Take the scab from the wart or issue on the inside of the leg, rub the halter thoroughly with that, and they will not be caught chewing their halter very soon. I have tried pepper, tobacco &c., but nothing to so good purpose as their own or kindred musk.

To Destroy Ants and Prevent their building their Mounds upon Meadows.—I take a hoe just as the ground is about to freeze in the fall, cut the mound off even with the ground, then sprinkle on the spot where the mound stood, about a shovel full of unleached ashes. The ants having burrowed a little below the surface, the lye of the ashes causes their utter destruction. The part taken off should then be removed from the meadow to the compost heap, or placed in some ditch or hole for the purpose of making the meadow smooth and level.

Coalpit Dust, I think has proved beneficial to my fruit trees, by placing a few shovels full about the roots of each tree ; it keeps away the grass, prevents the borer from entering the bark, and withal makes an excellent manure.—*Alb. Cult.*

It has been shrewdly said, that when men abuse us, we should suspect ourselves, and when they praise us, them. It is a rare instance of virtue to despise censure, which we do not deserve ; and still more rare to despise praise which we do. But that integrity that lives only on opinion, would starve without it ; and that theatrical kind of virtue, which desires publicity for its stage, and an applauding world for an audience, could not be depended on in the secrecy of solitude, or he retirement of a desert.

A farmer should have several enclosed pastures to pasture his stock alternately in, to allow the grass time to recruit.

MICHIGAN FARMER.

JACKSON, FEBUARY 15, 1845.

Apology.

The editor has observed with regret, the re-insertion, in the last number, of two short articles, which had appeared before, together with several typographical errors. Illness, and the diseased condition of his eyes, preventing due examination, must plead his apology. He has now engaged such assistance, during the continuance of these partial disabilities, (which he trusts will be brief,) as may prevent the recurrence of similar errors hereafter.

Exchanges.

We have pleasure in acknowledging the receipt of the first number of "The Indiana Farmer and Gardener," a semi-monthly journal just published at Indianapolis. It is neat in form and execution, and from the decided ability which characterizes this number, we have no doubt it will prove an efficient auxiliary, in advancing the interests of agriculture in that flourishing state.

"The Southern Cultivator," published at Augusta, Ga., comes to us in a greatly enlarged form. It abounds in matter full of interest to the south, and deserves extensive patronage.

On raising the Cultivated Grasses.

The lands of this State, for farming purposes, may be divided into three general classes—the timbered lands, the openings, and the wet prairies or marsh meadows. Each of these requires its peculiar treatment, in order to be seeded down, and made productive of good crops of grass.

The timbered lands of this State resemble those of the eastern States in their general character, with this difference, that there is here a greater or less intermixture of sand. But the proportion of clay is so predominant, that they are well adapted to the growth of grass; and nothing further is necessary to insure a good crop, than to seed down, immediately after clearing, with the first crop of wheat. There are, however, occasional tufts of a wild grass, which are not removed by the harrow, and are some impediment to the cultivated grasses, until they have been removed by ploughing. Then, no further application is necessary.

The marsh meadows, that almost peculiar feature in the geography of our State, and which, when reclaimed, add greatly to the beauty of its scenery, as well as to the substantial products of our farms, require their own peculiar management. After being first made sufficiently dry, by ditches, cut below the black vegetable mould, the gradual deposite of many centuries, to the hard substratum of gravel or clay on which it rests, if the surface is too rough, take a favorable time just before the breaking up of the frost, when the tops of the bogs are thawed, while the ground is hard below, so as to bear a team, and go over it with a harrow. When the frost has left the ground, sow the seed of herds grass and red top; and if the ground is firm enough, harrow it after the seed is sown,—for the more the old turf is scarified by the harrow, the better the seed will take. The new grass will grow thriftily, and gradually supplant the wild; each year showing less of the latter and more of the former.

It might be supposed that the most thorough method of seeding these lands, would be to reverse the sod with the plough, when they have been made sufficiently dry—raise a crop of some kind of grain, and seed down in the usual way. But it is said that experience goes against this. The land is not found to sod well, doubtless owing to its being too exclusively composed of vegetable mould. This objection would probably be obviated by pursuing the practice of some eastern farmers, of carting on soil from the upland, to mix with the mould; and it would not, we suppose, require a large proportion of the upland soil to answer the purpose. When done, it would doubtless make an excellent soil, inexhaustible in fertility, and from the facility of irrigation, admirably adapted to the raising of both grass and grain, especially the former. Whether, in the present comparative price of farm products and labor, it would pay the cost, may be questionable. But it would be worth while for some of our farmers who are favorably situated for it, to try the experiment on a small scale, and satisfy themselves and others as to the result.

On the oak openings, the cultivation of grass crops is of the last importance, because they are indispensable to a correct system of rotation; and here unfortunately, is found the greatest difficulty in rearing them to advantage. The soil, although for the most part very productive in grain, yields, without some assisting application, but very ordinary crops of grass.

Experience has made us acquainted with two remedies for this—they are, the use of plaster and of manure. The former article is dear, costing from two dollars to two and a half per barrel; yet we are persuaded that every dollar expended for it, will give a return of three. It is conceded, that nothing more is needed to make our openings raise abundant crops of grass. Applied to the field in the dew of the morning, or immediately before or after a rain, in the spring of the year subsequent to that in which the protecting crop shall have been removed, is sure to succeed.—And this application will continue to be successful for many years, from the abundance of potash contained in these soils, which has been created as well by vegetable decomposition as by the numerous fires. But as the effect of the plaster will be to cause a large quantity of potash to be taken from the soil, with every crop of grass, the advantageous effect of the plaster will grow less and less, until, ultimately, it will be scarcely perceptible, until some fresh application be made which shall restore the potash to the soil.

But it is not so generally believed that manures, properly applied, will have the same effect. We once made a little experiment on this point, which satisfied us that they would. A piece of ground of not more than two-thirds of an acre, was manured very richly, and planted with potatoes. After taking off a fine crop of these, the land was sown very thickly, the spring following, with clover and timothy, with a protecting crop of barley. The year after it was suffered to grow up for meadow, and the crop of grass obtained from it was very large. Four loads were taken off, and the estimate of the quantity was two tons.—The soil of this piece was like that of the openings generally—a sandy loam. No plaster, or other dressing was applied.

We feel now, no hesitation in recommending to farmers to use this method for seeding, as far as it will go. Take no more land than you can manure very richly, plant corn or potatoes, keeping the ground clean,—the next spring sow clover, or clover and timothy, with barley or spring wheat, (in preference to oats,) and we feel confident you will find yourselves rewarded with an excellent crop of grass. But be sure to apply plenty of seed. Thin sowing is bad policy every way. It makes the land but partially productive, while weeds grow up wherever the grass is wanting.

There are other questions relating to this subject, such as the exact quantity of seed best to be sown to the acre, the relative advantages of fall and spring sowing, the length of time during which a field may profitably be seeded down, &c., to which we would solicit the attention of practical farmers, and request them to send us the result of their observation and experience.

Procure your Grafts.

From the first of this month, to the swelling of the buds in the spring, is the season for procuring grafts for your fruit trees. We earnestly recommend those of our subscribers who are lovers of good fruit, and who have orchards not grafted, to lose no time in going to some of their neighbors, near or distant, that may have been beforehand with them in this particular, and obtain a few twigs from their bearing trees. They will cost little or nothing, but the trouble of going after them, and will repay this, a hundred fold.

When we consider that a tree, bearing the most delicious fruit, occupies no more ground, and costs no more trouble, (except the mere procuring of the graft, and inserting it,) than the most indifferent seedling, it would seem that no further inducement would be wanted. Yet, we know of some farmers, who have orchards that have borne a number of years, and have not a graft inserted. True, they have a few trees which produce good fruit; but the greater part are comparatively worthless—compared, we mean, with the choice kinds which may be obtained by grafting. All grafts were, to be sure, originally procured from seedlings; but they are the choicest seedlings that have been produced for many years, both in our own country, and in Europe.

Much care should be used to prevent grafts, after being cut, from drying up, or from being exposed to alternations of cold and heat. It is a very good way, to cover them with moist dirt, in the bottom of a cellar. They will bear sooner, if taken from a bearing tree.

The setting of the graft is a matter of little difficulty, and is rather a pleasure than a task. For the benefit of those, who may not be familiar with the process, all necessary information, relating to it, will be given, in due season, in the pages of the Farmer.

There is one species of fruit, to which our State has proved itself well adapted, but which, for some reason, which we are at a loss to divine, has been very generally neglected. We refer to the Quince. This fruit sells in our markets at a price that would cause a good orchard of them to yield an income, equal to that derived from an ordinary farm. Those who first embark in the cultivation of it, will be sure to reap a rich reward, both of pleasure and profit.

It grows well, when grafted into the thorn-apple bushes; also, may be procured at our principal nurseries.

The great, and indeed, the only difficulty in this State, in the production of fruit, is found to be the too early starting of the bud in the spring—the joint effect of a warm soil, and the premature warm weather that is apt to occur in March and April. Two methods of obviating this difficulty have been recommended. One is, to select, when it is practicable, a northern exposure for the site of the orchard. This plan is unexceptionable, and to a considerable extent, efficient. The other is, to retard the putting forth of the trees, by stamping the snow about their roots in winter, covering it with some substance that will protect it from the rays of the sun; such as leached ashes, straw, or long manure from the barn-yard. On this there is a difference of opinion. We have never seen the experiment tried, but the following arguments against the practice, which we extract from the Indiana Farmer and Gardener, seem to be at least very plausible.

Protecting the Roots of Fruit Trees.

Cultivators are frequently urged in Horticultural papers to *cover the roots* of the Peach trees with heaps of snow, &c., that they may be retarded in the spring, and escape injury from late frosts upon their blossoms. This direction takes it for granted that the warmth of the ground starts the root, and the root starts the sap, and the sap wakes up the dormant branch. By covering the soil and keeping it back, the whole tree is supposed to be secured. But, unfortunately for this process, the motion of the sap is first in the branches, and last in the roots. Light and heat, exerted upon the branches for any considerable length of time, produce a high state of excitability; the sap begins to move toward the bud, its place is supplied by a portion lower down, and so on until the whole column of sap through the trunk is in motion, and last of all in the ROOT.—But suppose warm, spring days, with a temperature of from 60° to 65°, have produced a vigorous motion of the sap in the branches and trunk,

while the root, (thanks to snow and ice piled over it to keep it frozen,) is dormant, what will result? The sap already within the tree will be exhausted, the root will supply none, the light and heat still push on the development of bud and leaf, and the tree will exhaust itself and die. We not long since observed a remarkable confirmation of these reasonings. A gentleman in Huntington Co., Ia., reading these unskillful directions to cover the peach tree root, opened trenches about his trees, and filled them with snow, heaping bountifully also all about the trees. The next spring, long after his trees should have been at work, the snow held the root fast; the buds swelled and burst, lingered, shrivelled and died—and the trees too. This might have been prognosticated. There are partial methods of protecting the peach from too early development, but they all have respects to the protection of the *limbs*. If the branches can be covered during the random and prematurely hot days of spring, the tree will not suffer. High, and cool-aired aspects, north hill-sides, northern sides of houses, barns, &c., will answer this purpose. When it can be afforded, long boards may be set up upon the east and south side of choice trees, upon a frame slightly made and easily removed.

The reason why more damage has not been done by covering peach tree roots, than has occurred, is, that the ground has been superficially frozen, and many of the roots extending deeper and laterally beyond the congealed portions, have afforded a supply of sap after a motion had been imparted to it in the branches.

P. S. Just as the above left our hand, we received the Ohio Cultivator, taken in the very act of sinning in this matter:

"*Care of Peach Trees in Winter.*—If there is a fall of snow, take a shovel and pile the snow around the tree, treading it well, two or three feet in height. Then cover it lightly with carpenter's shavings or straw, of light color, just so as to keep the sun from melting the snow as long time as possible. A few pieces of board will answer nearly as well as shavings or straw. If there should not be sufficient snow, and the ground freezes to a considerable depth, it may answer the same purpose, if you place something of the kind on the south side of the roots of the tree. A little labor in this way may prevent the injury that in this climate so often results from a few days of untimely hot weather during the latter part of the winter; and as a reward you may be able to luxuriate on fine peaches next summer, while your less thoughtful neighbors are destitute."

A much shorter way of doing the same thing, would be to *saw off* the trunk near the ground, and lay the top carefully away in some sheltered place. We are persuaded that friend Bateman, upon a moment's reflection, will recant his heresy in this matter.

Query.—May it not be, that the experiment mentioned above by our cotemporary, was carried too far? It strikes us as very possible, that a certain degree of artificial retardation caused by keeping the roots cold, may be practiced with safety and advantage, while if the same be too long continued, it would be fatal to the tree.—At all events, we think we should venture to try it cautiously.—Ed. Farmer.

Usefulness of Moles.

Our correspondent, says one of our exchange papers, whose communication on the utility of Moles in destroying the wire-worm, and other grubs which feed on the plants of the young corn, has furnished the following additional information on this subject:

"I had," he says, "a small field of rye-grass and clover, one end of which, early in the spring, was like a honeycomb from workings of moles. A farmer would have destroyed the workers; I, on the contrary, protected them, and not one was destroyed: but I took care to level the mould which they threw up almost every day. And now to the practical result. I lately cut my crop, which was a very good one generally; but at the end where the moles worked, the crop was better than any other part; and now not a mole can be discovered in the field. They did the work designed for them by a wise Providence—ate up all the grubs, which would have destroyed my young plants, and then took their departure to some neighbor's field, where doubtless they will be trapped. Another remark as regards birds: for example, as to the tit-mouse: the vulgar idea is that they destroy the buds, and thus injure or ruin the crop. Now I never suffer one of that kind of birds to be killed, but rejoice to see them, and protect them; and I would rather see a superabundance of sparrows than none at all, even by way of profit; and the consequence is, that I have frequently had a crop of fruit when my neighbors have had none.

"Again, as you pass cottage gardens, you will very frequently see the leaves eaten off the cabbages, gooseberry and currant bushes, growing near the doors, by caterpillars; while cabbages in the fields, and fruit trees at a distance from houses, are flourishing and left untouched. Here again the same cause is in operation; the small birds, which would have destroyed the insects, are driven from the doors, but perform their natural operations at a distance from them."—*Wes. Farmer and Gard.*

Forcing Fruit Trees to bear.

Greenup County, Ky., March 3, 1842.

Dear Sir,—Having addressed you an epistle a fortnight ago, I did not at that time intend to write you again until I saw your comments upon the project proposed in that letter; but being under the conviction that I could not write too much for the good honest hearted yeomanry of the land, provided I kept in the limits of valuable information, I have, by the idea of facilitating the labor of the producing man in some measure, been prompted to address you at this time, the main object of which is to apprise the agricultural community of a novel mode of raising apples. I do not wish to be understood that it is novel with all, for it has been practised in Europe for many years, by the farmers in Germany in particular, who probably are the inventors; but I mean it is novel to me, and if not to all, in my knowledge is at least not practised by them.—The steps to be taken by the farmer to force his fruit tree to bear, as it is termed, are of a very simple nature, and can consequently be executed by any person who turns his hand to it without the aid of a practical operator, further than a description of the process. I hope, therefore, that my agricultural friends will not deem the description which I am about to give of the process to force trees to bear, unecessarily minute. With a sharp knife (the blade of a penknife is the best) make a cut in the bark of the branch which is meant to be forced to bear, and not more than eight or nine inches from the place where it is connected with the stem, or if it is a small branch or shoot, near where it is joined to the large bough, (three inches or less,) the cut is to go round the branch, or to encircle it, and penetrate to the wood. Care must be taken not to cut the wood, which would necessarily cause detriment to the branch or shoot operated upon. A quarter of an inch or nearly, from the first cut make a second in the same way round the branch or shoot, so that both encircling the branch or shoot, a ring is formed thereon a quarter of an inch broad between two cuts. The bark between these two cuts is now taken clean away with the small blade of a penknife, down to the wood, removing even the fine inner bark, which immediately lies upon the wood, so that no connection whatever remains between the two parts of the bark, but the bare and naked wood appears white and smooth; but this bark ring, to compel the tree to bear, must be made at the time when the buds are strongly swelling, just before breaking out into blossom. In the same year of this operation, a callus is formed at the edges of the ring on both sides, and the connexion of the bark that had been interupted is restored again without any detriment to the tree or branch operated upon, in which the artificial wound soon grows over. By this simple (though artificial) means of forcing every fruit tree with a certainty to bear, the most important advantage will be obtained by those who watch the time nature is ripe for it. Three years ago, (the time when I was first informed of this singular way of forcing trees to bear,) I made an experiment on an apple tree. Being somewhat cautious of humbuggery, I confined the experiment to one branch of the tree, which was about a fourth part of the whole top of it. I did not notice it until May. I had partially forgotten it, as I had but little faith in its having any effect toward making the tree bear, and called by, rather to see if the limb which I had cut was not dead, than to observe any thing else; but to my astonishment I found the limb which I had expected to find dead in a vigorous state of life, with as much young fruit on it, apparently, as all the rest of the tree. On examining the young fruit, I found that on the branch which I had cut to be sound and firm, while that on the other parts of the tree were dwindled and very much decreased. I expected at first that it was owing to the cut which I had made on the branch, but I satisfied myself by examining other trees which I found to be in the same way, and which I found shortly afterwards to be falling off. In September, when I gathered the apples, I found that the branch of the tree which I had made the experiment on, had five bushels on it, and the rest of the tree had not above one bushel on it, and that was inferior fruit. I would therefore recommend that farmers who have orchards would try the experiment. It would be well for them to be particular in the operation at first, for fear of damaging the tree.—*West. Far. and Gardner.*

William R. Thompson.

Chicken Salad.—Boil a chicken that weighs about one pound and a half, when very tender, take it up, cut it in small strips, and make the following sauce; boil four eggs three minutes—take them out of the shells, mash and mix them with a couple of spoonfuls of olive oil, or melted butter, two thirds of a tumbler of vinegar, a teaspoonful of mixed mustard, a teaspoonful of salt, a little pepper, and essense of celery, if you have it—if not can be dispensed with. In making chicken salad, the dressing should not be put on till a few minutes before the salad is to be eaten, as by laying in it the chicken will become hard.—*Mrs Ellis.*

The Horse.—Have mercy on your horse.—Don't beat him so savagely because he cannot pull that heavy load up the steep hill. You require too much of the animal. See how he struggles beneath the lash, vainly striving to ascend. Don't strike him again. Take off about half the load, and you will have no trouble. We wish every cartman had the feeling and the spirit of John Howard, and so doubtless do the poor, overloaded horses.—*Common School Journal.*

Prevention of the Fly in Sheep.—I have heard that an excellent way of preventing sheep being struck with the fly, is to mix train-oil and sulphur to a moderately thick substance, and then occasionally apply it with a brush down the back of each animal, during the season that the fly is about.—*M. A. S.* [The plan will very frequently succeed in preventing the attack of the fly, but a more simple method is the occasional application of coarse whale-oil.]—*London Ag. Gaz.*

Broom Corn—*The Seed is excellent for Fattening Sheep.*—Albert Hibbard, Esq. of North Hadley, tells us he makes use of all the seed of his broom corn to fatten sheep—they are very fond of it and will fatten better on this than on Indian corn. Broom corn is raised in great quantities in the river towns, where the brooms are made up and distributed to all quarters of the country.

We have often raised the corn for the sake of the brush, but we have never made much account of the seed, though hens are always fond of it. Hogs too will eat it, though we think it has seldom been converted to meal for hogs. Mr. Hibbard thinks the broom corn seed more valuable for sheep than oats or any grain, pound for pound.—*Bost. Plough.*

Shell fruit, such as walnuts, chestnuts, &c., may be preserved for a year or two by being divested of their outer shell, and thoroughly dried

Young Mens' Department.

COUNSEL FOR THE YOUNG.

Whatever profession you may select, enter it with zeal, with ardor, with elevated and expanded views, with noble and disinterested motives, as becomes a youth of liberal education, an enlightened adventurer, bent on glory and setting out in a career of immortality.—Always be alive to the promotion of virtue; to the suppression of vice; to the relief of misery. Always be projecting and maturing new plans of public and glorious enterprise—nor feel as if any thing had been done while any thing of good remains to be accomplished.

But when all the world are mean and mercenary, is it to be expected that you will be dignified and disinterested? 'Tis false. All the world are not mean and mercenary. If it were so, the stream of life would have corrupted as it flowed, and the race become extinct.

It is conceded, because it cannot be denied, that mean and mercenary motives prevail; that a crowd of guilty actors have converted the drama of life into one vast exhibition of fraud and falsehood; of deceit and treachery; of avarice and revelry—among whom personal interest predominates, and individual emolument forms the bond of criminal alliance. But at the same time it is contended that there exists a countervailing influence: that a counter scene is continually carried forward, in which actions of a different type are unfolded—actions which tend to relieve the picture of human guilt, and soften the intenseness of human misery. In the worst of times and in the most depraved of countries, there are always scattered up and down some individuals of a benign and virtuous character, whose benevolent exertions are limited by no boundaries of territory, shades of complexion, or ties of blood—who with a perseverance that never relaxes, and a vigilance that never slumbers, are pursuing, not their own, but the public welfare: whose hours of relaxation and of business are alike occupied with plans of utility or of reform, and the grand and predominant object of whose exertions and whose prayers is, the happiness of the whole human family.

If you knew the world better than you do, you would know that it comprises a great variety of character—"That none are absolutely perfect; that those who approach towards perfection are few; that the bulk of mankind are very imperfect, and that many, but not the majority, are exceedingly profligate, deful and wicked."

But though the world were universally as mean and mercenary as the objection states, it would not alter the counsel we are giving you. In such a world, it would behoove you to be nobly singular. From such society I would separate; against such principles I would protest. However the multitude might live, for my single self I would act uprightly: I would frown on vice; I would favor virtue—favor whatever would elevate, would exalt, would adorn the character, and alleviate the miseries of my species, or contribute to render the world I inhabited, a place of innocence and felicity.

Mere youthful adventurers as you are, and though only individuals, each of you possesses a capacity for doing either good or evil, which human foresight cannot measure nor human power limit. Your immediate exertions may benefit or injure some—your example may reach others—those whom your example reaches may communicate their feelings to individuals more remote, by whom those feelings may be again communicated to those who will re-communicate them—All of whom may transmit the influence which commenced with you to a succeeding generation; which in its turn may again transmit it to the next, to be again transmitted. Thus the impulse given either to virtue or to vice, by a single individual, may be immeasurably extended, even to distant nations, and communicated through succeeding ages to the remotest generation.—Dr. Nott.

Mechanics' Department.

Manufacture of American Iron.

I need not say that the two substances, which have most contributed to the comfort and civilization of the world, are coal and iron. The naturalists have asserted, that the chief ingredient of the richest precious stones is carbon; and that, after all, a diamond and a coal are the same thing. The comparison disparages the coal, since certainly, for every purpose of human comfort or enjoyment, the coal outweighs all the gems that ever glistened at all the coronations of all the sovereigns of the earth. As to iron, is it not far more valuable than all the miscalled precious metals? The best friend of man, his companion in every stage of his civilization, from the rough ploughshare to the complicated steamship. These elements of wealth, the coal and the iron ores, were scattered profusely over this country, but some inexplicable mystery kept them asunder. The coal, in its fiercest intensity, could make no impression upon these impenetrable masses, and the adjoining hills which contained them frowned on each other, as upon neighbors who could never be united. At length, by one of those happy inspirations which confound all reasonings, the whole obstacle was removed, in a way so simple, that every body wonders it was never dreamed of till now. When these ores and coal were put together in a furnace, the fire was kept up by a stream of cold air. To this process the ores refused to yield. At last, a projector tried what impression he could make by a stream of hot air, and the ores instantly gave up their treasures, like the traveller in the fable, who only wrapped himself the closer at the cold wind, but could not resist the sunshine. And this, after all, is the great mystery,—the substitution of what is called the hot blast for the cold blast.

Let us see the changes which this simple discovery is destined to make. As long as the iron ores and the coal of the anthracite region were incapable of fusion, the ores were entirely useless, and the coal nearly unavailable for manufactures, while, as the disappearance of the timber made charcoal very expensive, the iron of Eastern Pennsylvania was comparatively small in quantity and high in price, and the defective communications with the interior made its transportation very costly. The result was, that, with all the materials of supplying iron in our own hands, the country has been obliged to pay enormous sums to Europeans for this necessary. In two years, alone, 1836-7, the importations of iron and steel amounted to upwards of twenty-four millions of dollars. The importations for the last five years have been about forty-nine millions of dollars. It is especially mortifying to see, that, even in Pennsylvania, there has been introduced, within the last seven years, exclusive of hardware and cutlery, nearly eighty thousand tons of iron; and that, of these, there were about forty-nine thousand tons of railroad iron, costing probably three millions and a half of dollars. Nay, at this very day, in visiting your mines, we see, at the furthest depths of these subterranean passages, the very coal and iron brought to the mouth of the mines on tracks of British iron, manufactured in Britain, and sent to us from a distance of three thousand miles. This dependence is deplorable. It ought to cease for ever; and let us hope, that, with the new power now acquired, we shall rescue ourselves, hereafter, from such a costly humiliation. We owe it to ourselves, not thus to throw away the bounties of Providence, which, in these very materials, have blessed us with profusion wholly unknown elsewhere.

The United States contain, according to the best estimates, not less than eighty thousand square miles of coal, which is about sixteen times as much as the coal measures of all Europe. A single one of these gigantic masses runs about nine hundred miles from Pennsylvania to Alabama, and must itself embrace fifty thousand square miles, equal to the whole surface of England proper. Confining ourselves to Pennsylvania alone, out of fifty-four counties of the State, no less than thirty have coal and iron in them. Out of the forty-four thousand square miles, which form the area of Pennsylvania, there are ten thousand miles of coal and iron, while all Great Britain and Ireland have only two thousand; so that Pennsylvania has five times as much coal and iron as the country to which we annually pay eight or ten millions of dollars for iron.

Again, the anthracite coal fields of Pennsylvania are six or eight times as large as those of South Wales. Of these great masses, it may be said, confidently, that the coal and the iron are at least as rich in quality, and as abundant in quantity, as those of Great Britain, with this most material distinction in their favor, that they lie above the water level, and are easily accessible, while many of the mines of England are a thousand or fifteen hundred feet below the surface.

With these resources, you have abundant employment, if you could only supply the present wants of the country, for which we are now dependent upon foreigners. But the sphere of demand is every day widening, for the consumption of iron. The time has come, when nothing but iron roads will satisfy the impatience of travellers, and the competition of trade. The time is approaching, when iron ships will supplant these heavy, short-lived, and inflammable, structures of wood. We shall not long be content to cover our houses with strips of wood, under the name of shingles, prepared for the first spark, if we can have low-priced iron; in which event too, the present pavements of our towns would be superseded by footways of iron.

Perpetual Motion.—As no motion can take place without the application of an adequate force, so no machine can act unless driven by some natural agent. Neither can any machine long continue to work after the prime mover ceases to act. Hence machines which shall keep up their own action, and which have been sought under the names of perpetual motions, are impossible.

Improper Language.—Never use improper words or indecent language. It betrays a grovelling mind, and does not speak well of the society you keep. Such language offends the ear of modesty, and makes your presence an offence to respectable society.

Ladies' Department.

Training of Children.

It cannot be too often repeated, that the direction given to the strong curiosity and busy activity of a child, will fix its habits, form its temper, and decide its future character. Youth takes its turn from childhood; childhood, from infancy. The proper direction of such propensities requires, indeed, the most watchful attention—attention which must never cease, and which never knows an intermission. But the labor thus bestowed, secures a rich return; and to neglect it, will pierce a parent's heart with many sorrows.

Self-Command, is among the earliest habits to be fixed in childhood. Of this, we cannot say, "Here ends the first lesson." It is an endless progress, in a circle of care and effort. It is so interwoven with every occupation and amusement, with every personal virtue and social enjoyment, that separation is impossible; and on this subject peculiarly, the consequences are linked with the circumstances, as by a chain of adamant. The remedy must begin with the first symptoms of the disease, and never be laid aside, so long as a symptom remains. Appetite and passion are strong, even in the infant. She cannot check it by consideration, for she cannot reason. In this way, the power of restraint is committed by Providence, entirely to the parents; and they are as much bound to provide for this, as for any other want of helpless infancy. Impatience for little enjoyments, or with little restraints, is an early cause of fretfulness. Fretfulness, if not checked, and absolutely *subdued*, increases rapidly, and will spoil the best natural temper. It is easy for misjudging parental tenderness to mar the fairest work of the Creator, and to convert the amiable infant, into the irritable, peevish girl; the ill-tempered, disagreeable woman. Prudent and persevering restraint—discreet and kind methods to divert the child's attention from the objects of desire, are the only possible remedies. Indulgence in unreasonable gratifications, or those which demand an undue share of the time or strength of the mother or nurse, only increases the demands of the child, and the difficulty and pain of subduing it.

I have seen a fretful boy rave and stamp upon a mud-puddle, because it was over his shoes. A hundred such instances may be easily remembered, by any careful observer of ungoverned temper. Those who are thus trained, or rather who are left untrained, bring perpetual anxiety and trouble upon themselves and their families; and often render all about them unhappy for life. How many confirmations are there of the truth of the preverb, "*A child left to himself, bringeth his mother to shame.*" The self-will thus cherished becomes an incurable habit, which all the shame and sorrow that attend it in after life, will not eradicate. The woman who is thus left to have no rule over her own spirit, is like "a city broken down and without walls." Who could hope for shelter or comfort in such a residence? It is open to the attacks and the contempt of every one. "Hate, fear, and rage—the family of pain," are its only inmates.—"Hope, love, and peace," have long since deserted the abode of ungoverned passions. How little do parents think of the sorrows they are preparing for themselves, as well as their children, by neglecting this great lesson of self-command. Long must they eat the bitter fruits of the tree they have planted, and seek too late for a remedy.

Nor do the consequences cease here. The vices and evils of ungoverned appetites and passions descend from parents to children, and their consequences are often seen and felt, to the third and fourth, if not to every following generation.

Think of this ungoverned temper, in *the mother of a family*, venting itself in fretfulness and reproaches towards the inseparable companion of her life, or in scolding, and violence, and tyranny, towards her children. Alas! how many scenes of domestic misery might be traced to the ungoverned girl! And how often is the brightness of domestic joys dimmed, by the clouds which arise from a *half subdued* temper! Such mothers sometimes pretend to govern their children's temper, by treating them with severity, or restraining them by force. But let it be remembered, that I am urging the importance of teaching the child *self-command*, and not merely *submission* or obedience. We do not speak merely of *governing her*, or preventing any evil, but of teaching her and accustoming her to *govern herself*.

How delightful is the contrast of a mother whose spirit has been brought under her own control, whose temper has been trained, until it is gentle, as well as firm, and who thus gives the best lessons of self-command in her own example. The example is seen reflected on every department of her household, and on every member of her family. A fair city is thus exhibited, as upon an eminence. It is seen and admired from afar; it is the delight of all who enter it. Wherever domestic order and happiness exist, they are based upon this single habit of self-command; supporting and consolidating the fabric of love. Children thus educated, by firm and gentle restraint—thus led on by living examples—will rise up and call their mother blessed. Among strangers and foreigners, they will be loved for the virtues imbibed from their parents;—and parents, though personally unknown, will be honored for their children's virtues. Happiest of the happy are such families! and a large part of their joys is secured by *self-command.*—*Selected.*

Home Circle.

My Mother's self-sacrificing, ceaseless care—never shall, never can, be forgotten—is remembered only with grateful emotions; she relinquishes every pleasure—not so—absorbs all lesser joys in the delight of ministering to the enjoyment of her children; heavenly guardian!

My Father's kind, timely counsel; in which confidence tells me there is no sordid, ambitious incentive—the ever fast friend.

My Sister's gentle affection—so pure, so disinterested; whose foot ever bounds obedient to the quick gush of her warm heart—with no motive but to promote my happiness—asking no other reward than the consciousness in her own bosom that she has succeeded; sure talisman of virtue.

My generous, robust Brother; who advances his own enjoyment in enhancing mine; whose muscular grasp sends pain through my nerves, that the heart may thrill with the sure evidence of his unbounded cordiality; the confidant who never betrays.

Who hath not known the unwritten joys of home—the inexpressible endearments of the family circle? let him force upon himself a tedious absence; and if his bosom does not throb, and his whole being thrill with delight to meet that mother's smile, that father's welcome, that sister's love, that brother's greeting, he is, indeed, a stranger to life's richest joys; he knows not the moiety of human happiness.

A Woman worth having.—Early in our history, the hand card, the little spinning wheel, and the loom with the hand shuttle, were almost the only instruments of manufacture in this place. The grandmother of General Miller paid for 400 acres of land in fine linen, made entirely (except getting out the flax,) by her own hands." The General Miller here spoken of, is the hero of the battle of Niagara or Lundy's Lane, in the last war; and should war again threaten our borders, or our institutions be placed in danger from causes, within or without, it will be the children of such mothers, the free, uncorrupted, hardy sons of the country, that will prove its safegurd. From the feeble, enervated, children of luxurious idleness, *men* cannot be reasonably expected.—*Selected.*

A Heroine.—That title is more commonly accorded to those only who bustle and battle through the world. A great injustice! For many a being of calm temperament, and unobtrusive conduct is at once the inspiration and the sustenance of acts, which but for them would not be heroism.

BANK NOTE LIST.

CORRECTED FOR THE MICHIGAN FARMER.

MICHIGAN.		Bank of Buffalo	85 dis
F & M B'k & Branch	par	Clinton county	30 dis
Bank of St. Clair	par	Watervliet	30 dis
Mich Insurance Co	par	Com bank Buffalo	30 dis
Oakland County Bank	par	Com bank Oswego	30 dis
River Raisin Bank	par	Bank of Lyons	30 dis
Mer B'k Jackson Co		B'k America, Buff	40 dis
Bank of Michigan	68 dis	B'k Commerce do	45 dis
State Scrip	3 a 4 dis	Bank of Oswego	50 dis
State Warrants	34 dis	Bank of Lodi	20 dis
OHIO.		Binghampton	25 dis
Specie paying banks	par	Cattaraugus county	40 dis
Cleveland	55 dis	Erie do	50 dis
Com bank Scioto	25 dis	Mechan b'k Buffalo	50 dis
" Lake Erie	15 dis	Mer Ex bank do	50 dis
Far bank Canton	60 dis	Miller's bank, Clyde	20 dis
Granville	75 dis	Phœnix b'k, Buffalo	40 dis
Hamilton	25 dis	Tonawanda	dis
Lancaster	30 dis	U. S. bank, Buffalo	35 dis
Mer & Trader's Can	15 dis	Western New-York	35 dis
Manhattan	90 dis	Staten Island	55 dis
Miami Exp Com	60 dis	Olean	40 dis
Urbana bank'g Com	60 dis	Alleghany county	75 dis
INDIANA.		St. Lawrence Stock &	
State bank & bran	1 dis	Real Estate Notes	55 dis
State Scrip	30 dis	Stock Notes	75 dis
ILLINOIS.		State bank, Buffalo	80 dis
State bank	50 dis	Wash'n b'k, N. Y.	10 dis
Shawneetown	50 dis	Union b'k, Buffalo	35 dis
KENTUCKY.		CANADA.	
All good banks	2 dis	All	2 dis
PENNSYLVANIA.		WISKONSAN.	
Specie paying	1 dis	Fire & Marine Insurance Co. Checks	1 dis
Erie	2 dis	MISSOURI.	
Relief Notes	5 dis	State bank	2 dis
NEW YORK, NEW JERSEY, & NEW ENGLAND.	par		

Miscellaneous

A Marriage Portion.

Allow me to introduce a simple story; though perhaps not new, nevertheless interesting in its results. On the margin of a sunny lake lived a farmer; his shaded cottage was an object of pleasure to the mariner of our inland sea, and the traveler could not refrain his commendation as he passed the well tilled fields, rendered more attractive by the pervading spirit of neatness and order. A wife, with two daughters, shared the labors and pleasures of the farmer. One hundred acres were the extent of the farm, and the farmer's capital was little more than honesty, industry, and health. I need not paint the family circle in its devotion to sacred duties, nor its daily toil —the results will carry to every heart a view of the path pursued. His eldest daughter married, and he gave to her one-third of his farm, as her marriage portion. Notwithstanding this diminution of acres, he had the same quantity of products as formerly. In due time his youngest daughter married also, and he gave to her one-half of what remained—and still the produce of his farm was not diminished. The secret was easily discovered—he applied as much labor and attention to the remaining one-third part as he had been accustomed to give to the whole farm. Do you ask, how this applies to any of us? Let me explain. We divide our labor over too many acres to afford sufficient culture to each, and we neglect the aid of science, which teaches us to concentrate the various means always within our control, and their economical and appropriate application.—*Gen. Farmer.*

Heat and Cold.—We find the body capable of resisting a temperature sufficient to decompose dead matter. Animals, as well as men, have been exposed to a degree of heat exceeding that of boiling water, and without injury; when at the same time, a thermometer placed under the tongue has indicated an elevation of a few degrees only above the natural standard. This power of resistence is but of short duration, for the nervous influence is exhausted by so extraordinary a demand. Chemical agents come into play, and matter is resolved into lifeless form.

As regards cold, the same law prevails, the limits are the same. However great the power may be of resisting it, as soon as the nervous energy is exhausted, the system is subject to injury.

I have witnessed the effects of cold too long endured upon the little postillions, who are barbarously exposed to it in the winter season at St. Petersburgh. The lads bear it for a time, as they sit on their horses clapping their hands, and singing to keep up their courage; but this fails them by degrees, and finally benumbed, they fall from their saddles in a state of torpor which nothing but rolling them in the snow will overcome. There is seldom a fete given at St. Petersburgh in the extreme cold weather that occurrences of this kind are not recorded. In very cold nights the sentries are frequently frozen to death, if not relieved at short intervals.

An Infallible Remedy for Lowness of Spirits.—Take one ounce of spirits of resolution and an equal proportion of the oil of good conscience—infuse into these a table spoonful of salts of patience, and add thereto a few springs of a plant called "others' woes," which you will find freely growing in every part of the garden of life, but especially under the broad leaves of a showy herb called disguise. Gather also a handful of the blossoms of hope, which, being perennial, may always be obtained; sweeten these with the balm of Providence, and if you can procure a few drops of the *genuine* cordial of true friendship, it will greatly add to the value of the medicine. But in this one ingredient especially be careful of counterfeits. There is a spurious compound, vended by one Self-Interest, which is obtained easily enough and by which thousands are imposed upon. The least admixture of it with the above ingredients would infallibly spoil the composition. Reduce the whole to an electuary by a proper proportion of conserve of content, flavor it with essence of good judgment and regulate the quantity taken according to the virulence of the disease. A tried recipe and never known to fail.

Early Rising.—Next to temperance, a quiet conscience, a cheerful mind and active habits, I place early rising as a means of health and happiness. I have hardly words for the estimate I form of the sluggard, male or female, that has formed the habit of wasting the early prime of day in bed; putting out of the question the positive loss of life, and too the most inspiring and beautiful part of the day, when all voices of nature invite man from his bed; leaving out of the calculation, that longevity has almost invariably been attended by early rising; to me the late hours in bed present an index to character, and an omen of the ultimate hopes of the person who indulges in this habit.

There is no mark so clear of tendency to self indulgence. It denotes an inert and feeble mind, infirm of purpose, and incapable of that elastic vigor which will enable the possessor to accomplish what his reason ordains. The subject of this unfortunate habit cannot but have self-reproach, and a purpose to spring from his bed with the freshness of day. If the mere indolent luxury of another hour of languid indulgence is allowed to overrule this better purpose, it argues a general weakness of character which promises no high attainment of distinction. These are never awarded by fortune to any trait but vigor, promptness and decision. Viewing the habit of late rising in any aspect, it would seem as if no being could be found in the habit of sacrificing the freshest portion of life at the curtailment of the remainder, for any pleasure his indulgence could confer.—*Flint.*

Factory owned by Girls.—The factory girls of Lowell talk of establishing a large factory, to be worked by themselves, and of which they should be the joint-stock proprietors. Should such a scene be successfully put in operation, we presume it would not be long before the *proprietors* would have plenty of applications for *partners*. A young man might thus apostrophize a fair stockholder:

"Ever from that hour I loved her,
Till for her stock I paid her with myself."

—*Gen. Farmer.*

Parsnip Wine.—Wine made of parsnips approaches closely to the malmsey of Madeira, and is made with very little trouble or expense, and is wholesome and palatable.

To every 4 pounds of parsnips, clean and quartered, put one gallon of water; boil till quite tender; drain them over a sieve, but do not bruise them, as no process will clear the liquor afterwards. Pour the liquor into an open vessel, and to each gallon add 3 lbs. of sugar, and half an ounce of cream of tartar. When cooled to about blood heat, add a little new yeast, or emptyings: let it stand 4 or 5 days in a warm room, then put it into a cask, and when the fermentation has subsided, bung tight, and let it stand 8 to 12 months before using.

The months of April and May are the best for getting a good fermentation; and in these temperance times it is an experiment worth trying.—*Gen. Farmer.*

Fire wood.—If you have not already cut a sufficient quantity of wood to last you through the coming year, forthwith go to work, fell the trees, cut it up into cord word, and when that is done, haul it into your yard, and have it neatly piled convenient to your dwelling, kitchen, and quarters. To obtain fire wood by piece-meal, as the saying is, as it may be wanted, is to indulge in one of the worst habits into which a farmer can possibly fall, and never fails to be pregnant of evil. Therefore we may say to you, that you should not consider that you have discharged your duty to your family, and to yourself, until you have secured, within a few yards of your house and tenements, a supply of wood sufficient to meet every demand for at least twelve months to come.

Gates.—If the entries to your fields are through *bars*, substitute gates for them.—*Am. Farmer.*

Hints for the Season.—Settle all your accounts, collect what is due you, and pay what you owe. "Short settlements make long friends." Communicate your discoveries to some agricultural periodical, for the benefit of the world. Summer is peculiarly the time for making observations, and winter the time for communicating them.—*Amer. Agriculturist.*

Market Intelligence.

Jackson, February 15.

Grain—Wheat is worth 62½ a 65 cents; Corn 31½ Oats 16 a 18; Barley 37½; Rye 31½ a 37½.

Flour, per bbl., $3 50.

Provisions—Pork $3 a $3 a $3 25; Butter 15c; Lard 10 cts; Eggs 12½; Beans 75c; Tallow 8 cts.

Dried Apples are worth $1 50 per bushel.

Hides—Green, $3: dry, $6.

Beeswax is worth 25 cents.

JACKSON COUNTY MUTUAL FIRE INSURANCE OFFICE,

Jackson, January 15th, 1845.

NOTICE is hereby given that an assessment of seven per cent. upon the amount of each premium note was made by the Board of Directors of this Company, on the fifteenth day of January, 1845, and that if any member shall fail to pay the amount so assessed upon his premium note before the twenty-second day of March next, he will, together with his sureties, become liable to pay the full amount of such note with costs of suit. B. M. SHELDON, Sec'y.